

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of manufacturing a porous thick film having an electrical conductivity of at least 10^{-3} S/m at 800°C as an oxygen partial pressure ~~detecting part of a resistive oxygen sensor comprising taking a fine particle powder of an oxide containing cerium oxide as a raw material powder, preparing a paste containing the oxide, printing the paste onto a substrate by screen printing, calcining and sintering, the method comprising:~~

heat treating a raw material powder comprising a fine particle powder of an oxide comprising cerium oxide to affect a heat treatment step of carrying out heat treatment to effect particle growth from the average particle diameter of the raw material powder to a particle diameter less than the average particle diameter of the ultimately obtained porous thick film, thereby obtaining a particle growth-affected powder;

~~a step of mixing the particle growth-effected growth-affected powder with a solvent;~~

~~a step of dispersing agglomerated particles of the particle growth-affected powder in the solvent;~~

~~a step of removing a precipitate of the dispersion;~~

~~a step of evaporating off the solvent of the dispersion and thereby obtaining a resulting oxide; [[and]]~~

~~a step of mixing the resulting oxide with an organic binder to obtain [[the]] a paste;~~

~~printing the paste onto a substrate by screen printing;~~

~~calcining the printed substrate; and~~

~~sintering the calcined substrate.~~

Claim 2 (Original): The method according to claim 1, wherein the average particle diameter of the porous thick film is not more than 200 nm.

Claim 3 (Currently Amended): The method according to claim 1, wherein the average particle diameter of the particle ~~growth-effected growth-affected~~ powder obtained through the heat treatment step is at least 45 nm.

Claim 4 (Original): The method according to claim 1, wherein the average particle diameter of the raw material powder before the heat treatment step is at least 10 nm but less than 45 nm.

Claim 5 (Original): The method according to claim 1, wherein the raw material powder is subjected to heat treatment at 880°C to 920°C in the heat treatment step.

Claim 6 (Original): The method according to claim 1, wherein the proportion by weight of the oxide in the paste is adjusted to 10 to 30 wt%.

Claim 7 (Original): The method according to claim 1, wherein the fine particle powder of an oxide containing cerium oxide is a fine particle powder of an oxide containing cerium oxide and zirconium oxide.

Claim 8 (Withdrawn – Currently Amended): A ~~cerium oxide-based~~ porous thick film ~~as an oxygen partial pressure detecting part of a resistive oxygen sensor, the porous thick film~~ manufactured using the method according to any of claims 1 through 7, whereby the porous thick film has few cracks, has an average particle diameter of not more than 200 nm, and has an electrical conductivity of at least 10^{-3} S/m at 800°C.